

## ABSTRACT

In a thyristor based memory cell, one end of a reversed-biased diode is connected to  
5 the cathode of the thyristor. During standby, the second end of the diode is biased at a  
voltage that is higher than that at the cathode of the thyristor. During restore operation, the  
second end is pulled down to zero or even a negative value. If the cell is storing a "1," the  
voltage at the thyristor cathode can be approximately 0.6 volt at the time of the pull down.  
The large forward-bias across the diode pulls down the thyristor cathode. This causes the  
10 thyristor to be restored. If the cell is storing a "0," the voltage at the thyristor cathode can be  
approximately zero volt. The small or zero forward-bias across the diode is unable to  
disturb the "0" state. As a result, the memory cell is restored to its original state.